

INTERNATIONAL SEARCH REPORT

PCT/GB2004/000681

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04L29/08 H04L12/26 H04L12/18 H04N7/24 H04L29/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

13 May 2004

Date of mailing of the international search report

16.07.04

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SARA ALOUF: "Estimation de paramètres et analyse des performances de diverses applications réseaux / Parameter estimation and performance analysis of several network applications" INTERNET ARTICLE, [Online] 8 November 2002 (2002-11-08), XP002279352 Retrieved from the Internet: URL:http://www-sop.inria.fr/maestro/personnel/Sara.Alouf/these.html> [retrieved on 2004-05-07]	13
Y	page 2, paragraph 2 page 3, paragraph 3 page 63, paragraph 1 page 65 page 66, paragraph 3 page 69, paragraph 4 - page 71, paragraph 1 page 73 page 79 - page 80 page 88, paragraph 6 page 89 page 94 page 95, paragraph 1 page 2.7 page 108, paragraph 3	1-12,14
X	----- FRIEDMAN T ET AL: "Multicast session membership size estimation" INFOCOM '99. EIGHTEENTH ANNUAL JOINT CONFERENCE OF THE IEEE COMPUTER AND COMMUNICATIONS SOCIETIES. PROCEEDINGS. IEEE NEW YORK, NY, USA 21-25 MARCH 1999, PISCATAWAY, NJ, USA, IEEE, US, 21 March 1999 (1999-03-21), pages 965-972, XP010323794 ISBN: 0-7803-5417-6	13
Y	abstract page 965, column 1, paragraph 5 - column 2 page 965, column 2, paragraph 4 page 966, column 1, paragraph 5 page 967, column 1 page 968, paragraph D - page 969, paragraph F ----- -/--	1-12,14

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BOLOT J-C ET AL: "SCALABLE FEEDBACK CONTROL FOR MULTICAST VIDEO DISTRIBUTION IN THE INTERNET" COMPUTER COMMUNICATION REVIEW, ASSOCIATION FOR COMPUTING MACHINERY. NEW YORK, US, vol. 24, no. 4, 1 October 1994 (1994-10-01), pages 58-67, XP000477042 ISSN: 0146-4833	13
A	abstract page 59, column 1 page 60, column 2, paragraph 1 - paragraph 3 page 61, paragraph 4	1-12,14
A	----- ALOUF S ET AL: "Optimal on-line estimation of the size of a dynamic multicast group" PROCEEDINGS IEEE INFOCOM 2002. THE CONFERENCE ON COMPUTER COMMUNICATIONS. 21ST. ANNUAL JOINT CONFERENCE OF THE IEEE COMPUTER AND COMMUNICATIONS SOCIETIES. NEW YORK, NY, JUNE 23 - 27, 2002, PROCEEDINGS IEEE INFOCOM. THE CONFERENCE ON COMPUTER COMMUNICATIONS, vol. 1 OF 3. CONF. 21, 23 June 2002 (2002-06-23), pages 1109-1118, XP010593675 ISBN: 0-7803-7476-2 cited in the application abstract page 1109, column 1, paragraph 2 page 1110, paragraph A page 1110, column 2 page 1111, line 45 - line 49 page 1112, paragraph D - page 1113 page 1117	1-14
A	----- WO 01/37480 A (KONINKL PHILIPS ELECTRONICS NV) 25 May 2001 (2001-05-25) figure 1 figure 2 page 1, paragraph 1 page 7, line 21 - page 9, line 4 -----	1-14

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Information on patent family members

PCT/GB2004/000681

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0137480	A	25-05-2001	CN 1337108 T	20-02-2002
			WO 0137480 A2	25-05-2001
			EP 1219065 A2	03-07-2002
			JP 2003515269 T	22-04-2003

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Box II Observations where certain claims were found unsearchable (Continuation of Item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of Item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-14

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-14

Method for tracking the size of a multicast audience comprising: transmitting to the multicast receivers requests including a probability p , each terminal replying or not with a corresponding probability; counting the number of replies to each request; determining from r and p estimates of the number of receivers N ; filtering the estimates and repeatedly computing a new p by forecasting from r and p an upper bound of N and determining the new p therefrom.

2. claim: 15

Method for tracking the size of a multicast audience comprising: transmitting to the multicast receivers requests including a probability p , each terminal replying or not with a corresponding probability; counting the number of replies to each request; determining from r and p estimates of the number of receivers N ; filtering the estimates and adaptively adjusting the parameters of said filtering as function of the power spectrum of past values of the estimates.
